

## CLAIMS

1. A water-borne urethane resin composition for forming a microporous layer, comprising (1) a water-borne urethane resin having a heat-sensitive coagulation temperature of 40 to 90°C and (2) an associated type thickener.
2. A water-borne urethane resin composition for forming a microporous layer as claimed in claim 1, wherein said water-borne urethane resin (1) is a urethane resin having a softening temperature of 120 to 240°C.
3. A water-borne urethane resin composition for forming a microporous layer as claimed in claim 1 or 2, wherein said water-borne urethane resin (1) is a water-borne urethane resin having an average particle diameter of 0.1 to 5 µm.
4. A water-borne urethane resin composition for forming a microporous layer as claimed in any one of claims 1 to 3, wherein said water-borne urethane resin (1) is a water-borne urethane resin dispersed with a nonionic emulsifier having HLB of 10 to 18.
5. A water-borne urethane resin composition for forming a microporous layer as claimed in claim 4, wherein said nonionic

emulsifier has a structure represented by the following structural formula (I):



wherein R is a C<sub>1</sub> to C<sub>9</sub> alkyl, aryl or alkylaryl group; a  
5 represents an integer of 1 to 3; and Ph represents a phenyl ring residue.

6. A water-borne urethane resin composition for forming a microporous layer as claimed in any one of claims 1 to 5,  
10 wherein said associated type thickener (2) has a hydrophobic group located at at least one terminal and also has a urethane bond in a molecular chain.

7. A water-borne urethane resin composition for forming a microporous layer as claimed in any one of claims 1 to 6,  
15 wherein said associated type thickener (2) has a structure represented by the following structural formula (I):



wherein R is a C<sub>1</sub> to C<sub>9</sub> alkyl, aryl or alkylaryl group; a  
20 represents an integer of 1 to 3; and Ph represents a phenyl ring residue.

8. A water-borne urethane resin composition for forming a microporous layer as claimed in any one of claims 1 to 7,  
25 wherein said water-borne urethane resin (1) contains (A) a

polyoxyalkylene glycol having at least 50% by weight or more of a repeating unit of ethylene oxide and/or (B) a one terminal polyoxyalkylene glycol having at least 50% by weight or more of a repeating unit of ethylene oxide.

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9. A method of producing a fibrous sheet-like composite, which comprises:

(i) impregnating or coating a fibrous material substrate with

10 (ii) a water-borne resin composition comprising (1) a  
water-borne urethane resin having a heat-sensitive coagulation  
temperature of 40 to 90°C and (2) an associated type thickener,  
and

(iii) performing heat-sensitive coagulation with steam.

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10. A method of producing a fibrous sheet-like composite as claimed in claim 9, wherein said water-borne urethane resin is a water-borne urethane resin dispersed with a nonionic emulsifier having HLB of 10 to 18.

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11. A method of producing a fibrous sheet-like composite as claimed in claim 9 or 10, wherein said nonionic emulsifier has a structure represented by the following structural formula (I):

wherein R is a C<sub>1</sub> to C<sub>9</sub> alkyl, aryl or alkylaryl group; a represents an integer of 1 to 3; and Ph represents a phenyl ring residue.

- 5 12. A method of producing a fibrous sheet-like composite as claimed in any one of claims 9 to 11, wherein said associated type thickener is an associated type thickener which has a hydrophobic group located at at least one terminal and also has a urethane bond in a molecular chain.

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13. A method of producing a fibrous sheet-like composite as claimed in any one of claims 9 to 12, wherein said water-borne urethane resin is a water-borne urethane resin which contains (A) a polyoxyalkylene glycol having at least 50% by weight or 15 more of a repeating unit of ethylene oxide and/or (B) a one terminal polyoxyalkylene glycol having at least 50% by weight or more of a repeating unit of ethylene oxide.

14. A method of producing a fibrous sheet-like composite as 20 claimed in any one of claims 9 to 13, wherein steam temperature is from 70 to 120°C.

15. A method of producing a fibrous sheet-like composite as 25 claimed in any one of claims 9 to 14, wherein steam treatment time is from 10 seconds to 20 minutes.

16. A method of producing a fibrous sheet-like composite as  
claimed in any one of claims 9 to 15, which further comprises  
drying at a temperature of 80 to 150°C after heat-sensitive  
5 coagulation with steam.

17. An artificial leather obtained by the method of any one of  
claims 9 to 16.